AR 201-12549 b15

ROBUST SUMMARY
ALKYL SULFIDE CATETGORY
CAS # 68511-50-2
HEALTH ELEMENTS: REPEATED DOSE TOXICITY

Test Substance	
CAS #	68511-50-2
Chemical Name	1-propene, 2-methyl-, sulfurized
Remarks	This substance is also referred to as methyl propene derivative in HERTG's Test Plan for Alkyl Sulfide Category. For more information on the chemical, see Section 2.0 "Chemical Description of Alkyl Sulfide Category" in HERTG's Test Plan for Alkyl Sulfide Category.
Method	
Method/Guideline followed	Reference for study design: Federal Register, Volume 43, Number 163
Test Type	28 Day Subchronic Dermal Toxicity Study
GLP (Y/N)	Y
Year (Study Performed)	1982
Species	Albino Rabbits
Strain	
Route of administration	Dermal to shaved dorsal trunk area of abraded or intact skin
Duration of test	
Doses/concentration levels	Group 1: 200 mg/kg/day undiluted test material Group 2: 2000 mg/kg/day undiluted test material 36 animals tested: (6M,6F/group): 2 treatment groups, 1 untreated control
Sex	Male and female
Exposure period	
Frequency of treatment	
Control group and treatment	1 untreated control group (6M/6F)
Post exposure observation period	
Statistical methods	All data was submitted to analysis of variance (method: Statistical Analysis System, SAS Statistical Institute 1979) followed by evaluation using the Newman-Keuls method for all significant dose differences.
Remarks field for test conditions	Age at initiation of treatment: Not specified following 1 week acclimation. Study was designed to evaluate the subchronic toxicity of the test material when applied dermally. Methyl propene derivative was applied to the shaved dorsal trunk area (approximately 10% of the body surface) of 2 groups of 12 albino rabbits (6M,6F) 5 days per week for 4 weeks at dose levels of 200 or 2000 mg/kg/day of undiluted test material on the same test schedule. Half the animals in each group were abraded once per week throughout the study. The abrasion

	penetrated the stratum corneum but did not cause bleeding. The treated skin was occluded for at least 6 hours daily and the trunk of each animal covered with an impervious material. One untreated shaved control group of 6 animals (3 intact, 3 abraded) was included in the study. Assessments for local and systemic effects included clinical observations, skin irritation scoring 5 days per week, body weights (pretest, every 3 to 4 days during testing, termination), hematology , serum chemistry and urinalysis at pretest and termination, and gross necropsy evaluations at study termination.
Results	
Remarks	One male rabbit death at the higher dose level. Body weight gains in control (0.5 to 1.0 kg) and lower dose group (0.2 to 1.0 kg). A trend of weight loss and food consumption among the high dose males in the latter half of the study. Weight gain in 5 of 6 high dose females. Treatment with the test material caused severe skin irritation at both doses. Abrasion of skin increased the degree of irritation at the low dose level. No irritation was observed in the control group. Urinalysis values were normal for all groups. The low dose group showed an increase in chloride and a decrease in albumin. The high dose group showed decreased alkaline phosphatase and an increase in chloride and globulin. Hematology showed no trends in the control and low dose groups while monocyte determinations were significantly different (increased) in the high dose group. Gross and histopathological examination of tissues did not reveal any pattern of changes attributable to dermal contact with the test material. At autopsy one animal in the control group was found to be female instead of male and one animal in the low dose group was found to be male instead of female. Statistical evaluation including and excluding these two animals showed no significant differences. The hematological and clinical chemistry data do not suggest a consistent trend indicative of a response to the test compound
Conclusions	A NOAEL was not established in this study. A LOEL was not established in this study. No minimally irritating concentration was identified by this study.
Data Quality	Reliable with restrictions. Animal ages were not included in the report. Uneven sex distribution. Clinical behavior determinations beyond that of morbidity were not included in the report.
References	This robust summary was prepared from an unpublished study by an individual member company of the HERTG (the underlying study contains confidential business information).
Other	Updated: 12-28-99